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(six projects); and long-term monitoring (two projects).

The 14 sites requiring action during FY04 are the following:

- Horse Pasture - Performance Based Contract awarded fourth quarter FY03, to reach NFA in five years (will save \$6 million)
- LF-04 - Remedial Action for OU-2 Wetlands sediment removal
- Sanitary Sludge Placement Area - Remedial Action to install cover
- Duck Lake, LF-01, and LF-02 - Long-term monitoring



Remediation of the Horse Pasture Site will begin in FY04 as a Performance based Contract

- JP-4 Spill Site B and GBIA Sites - Remedial Operations for AS/SVE systems
- B2070/2072 POL Site - Remedial Operations (free product recovery and bioventing)
- Building 922 AAFES Gas Station - Remedial operations (enhanced bioremediation)
- LF-03, B645 UST Site, Third Street Storm Sewer, Underground Storm Drain/Culvert System at Flightline - Remedial Operations (pump and treat)

Mr. Hursey stated that these activities are on target to meet or exceed Air Force goals and will proceed with no interference with Base mission. Mr. Coyle commented that completion of these actions will ensure that Robins maintains its usual position as an Air Force leader in accelerating restoration activities well ahead of deadlines.

Glossary

AAFES	Army, Air Force Exchange Service
AFB	Air Force Base
AS	Air Sparge
B	Building
DVE	Deep Vacuum Extraction
EM	Environmental Management Directorate
ERP	Environmental Restoration Program
FY	Fiscal Year
GA EPD	Georgia Environmental Protection Division
JP	Jet Petroleum
LF	Landfill
NFA	No Further Action
OU	Operable Unit
PBC	Performance Based Contracting
POL	Petroleum, Oil, & Lubricants
RAB	Restoration Advisory Board
SVE	Soil Vapor Extraction
SWMU	Solid Waste Management Unit
TCE	Trichloroethylene
UST	Underground Storage Tank
VOC	Volatile Organic Compound

For more information regarding the RAB, contact  
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Restoration Advisory Board Members		
<b>Mr. Steven Coyle,</b> Robins AFB Installation Co-Chair	<b>Dr. Dan Callahan,</b> Warner Robins Community Member	<b>Mr. Mike Maffeo,</b> Macon Community Member
<b>Mr. James Harden,</b> Warner Robins Community Co-Chair	<b>Ms. Marianne Golmitz,</b> Warner Robins Community Member	<b>Dr. M.B. Neace,</b> Macon Community Member
<b>Dr. Dann Spariosu</b> U.S. EPA Region 4 Federal Facility, Hazardous Waste Div.	<b>Mr. John Harley,</b> Centerville Community Member	<b>Dr. Brian E. Rood,</b> Macon Community Member
<b>Ms. Mary Brown</b> GA EPD Hazardous Waste Management	<b>Dr. Joyce Jenkins,</b> Fort Valley Community Member	<b>Dr. Joseph Swartwout,</b> Fort Valley Community Member
<b>Mr. Fred Hursey, Robins AFB</b> Chief, Restoration and Resources Div.	<b>Mr. Steve Johnson,</b> Macon Community Member	<b>Mr. Don Thompson,</b> Macon Community Member
	<b>Mr. Broderick Lowe,</b> Warner Robins Community Member	



# Robins Air Force Base Restoration Advisory Board (RAB) *Fact Sheet*



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## The Robins AFB RAB

Recognizing the importance of public involvement in environmental restoration, Robins Air Force Base has established the Restoration Advisory Board. The mission of the RAB is to encourage community participation in the Air Force Environmental Restoration Program (ERP) cleanup process and allow community members and other stakeholders to have meaningful dialog with Base officials. The RAB includes members from the community, regulatory agencies, and the Base, and holds four public forums per year. The RAB serves to advise Robins AFB management and disseminate information to the public.

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## September RAB Meeting

The fall meeting of the RAB was held on September 11, 2003, at the Hampton Inn, Warner Robins, Georgia. The theme of this meeting was “Update on Remediation Systems.” Two briefings were presented; the topics covered were, “Base Industrial Remedial System Update” and “Environmental Restoration Program Update.”

This RAB *Fact Sheet* provides a summary of the information and topics discussed in the meeting.  
**The next meeting will be held on January 8, 2004.**

## Robins Plans Continued Major ERP Progress for FY04

**Mr. Fred Hursey**, Chief of the Restoration and Resources Division, briefed the RAB on the FY04 projected budget and action items. He began with a status report on all ERP sites. Of 42 total ERP sites, 24 have been closed already and an additional four are “Response Complete” with no remaining action except regulatory review and closure.



Landfill 4 is scheduled for additional remedial action during FY04 as OU2 Wetlands sediments are removed

The remaining 14 sites, undergoing some phase of remedial action, were the subject of the remainder of the briefing. For FY04, Robins plans a total of 15 projects with a total estimated budget of \$7 million. This budget estimate includes manpower (one project); travel/supplies/vehicles (three projects); management/technical support (three projects); remedial operations

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## Remediation Systems in Place & Operating at Seven SWMUs in Base Industrial Area

Initial Results Show Excellent Contaminant Removal Rates

**Mr. David Fortune**, CAPE Environmental, and **Mr. Mike Breazeale**, EM Project Manager, briefed the RAB on the remedial system installation activities that have occurred in recent months in the Base Industrial Area. RAB members were reminded that these sites were visited during the March RAB tour, when most consisted of concrete pads awaiting equipment.



The remedial system installed at SWMU 40, Machine Shop at Building 145, is adjacent to the facility. The installation was engineered to minimize disruption of Base mission areas and to eliminate parking lot space reductions

The seven SWMUs that were the subject of Mr. Fortune’s briefing exhibited contamination by one or more of several classes of compounds, including fuels and other petroleum hydrocarbons, and chlorinated compounds.

Remedial technologies selected for the SWMUs included air sparge (forcing air into the subsurface below the water table to remediate dissolved VOCs in groundwater), biosparge (a low-flow air sparge that enhances natural bioremediation processes), soil vapor extraction (applying a vacuum in soils above groundwater to remove VOCs using vertical wells), and deep

vacuum extraction (similar to SVE except using horizontal wells). The constituents that are removed from groundwater are removed from the vapor phase emissions by either thermal oxidation (destroying VOCs in emissions using clean burning processes) or carbon adsorption (removing VOCs from emissions using activated carbon to attract and retain the VOCs).

For each SWMU, Mr. Fortune presented summary data related to contaminant(s) of concern, remedial technologies selected for application at the SWMU, and steps involved in implementation, including numbers of extraction wells installed. He also presented numerous photos of each SWMU installation and pointed out key components of each remedial system.

At SWMU 40, the contaminant of concern is chlorobenzene. The remedial technology is SVE with thermal oxidation of extracted vapors. Implementation involved installation of the equipment for these processes and installation of six vertical SVE wells and two horizontal wells.

At SWMU 59 (JP-8 Product Line along Main Taxiways), the contaminant of concern is benzene. The remedial technology is AS/SVE with thermal



Ms. Kathy Stege, RAB Community Member from Macon, has resigned from the RAB due to other commitments. Ms. Logue and Mr. Coyle expressed appreciation for Ms. Stege's years of dedicated service to the RAB and wished her well in future endeavors

oxidation of extracted vapors. Implementation involved installation of the equipment for these processes and installation of 25 AS wells and 20 SVE wells. In addition, at this site, the remediation program utilizes the existing deep vapor extraction (DVE) system with four horizontal wells.

At SWMU 60 (JP-8 Product Line near Taxiways 2 and 3), the contaminant of concern is benzene. The remedial technology is AS/SVE with thermal oxidation of extracted vapors. Implementation involved installation of the equipment for these processes and installation of 25 AS wells and 25 SVE wells.

At SWMU 20, the contaminants of concern are trichloroethylene (TCE) and petroleum hydrocarbons. The remedial technology is AS/SVE with carbon adsorption of extracted vapors. Implementation involved installation of the equipment for these processes and installation of 13 AS wells and 11 SVE wells.

At SWMU 10B (JP-4 Spill Site B [POL]), the contaminant of concern is benzene. The remedial technology is AS/SVE with thermal oxidation of extracted vapors. Implementation involved installation of the equipment for these processes and installation of 15 AS wells and 25 SVE wells.

At SWMU 61, the contaminant of concern is benzene. The remedial technology is AS/SVE with thermal oxidation of extracted vapors. Implementation involved installation of the equipment for these processes and installation of 13 AS wells and 11 SVE wells.

At SWMU 10B (JP-4 Spill Site B [Biosparge]), the contaminant of concern is benzene. The remedial technology selected is biosparge. Implementation involved installation of the equipment for this process and installation of four AS wells.

Mass removal data were presented for daily mean mass removal/destruction. Mr. Fortune pointed out that the contaminants vary, geological environment and hydrogeology vary, status of optimization varies, and therefore removal efficiencies vary among the sites.



Constituents removed from the groundwater in the Base Industrial Area remedial systems are removed from the emissions by thermal oxidation (such as in the top photo) or by carbon adsorption vessels (bottom photo)

Similar data were presented for total mass recovery and destruction since each system was started up. The Base is collecting similar data for mass removal at all sites with active systems.

Mr. Fortune and Mr. Breazeale concluded by stating that the entire project was completed with minimal disruption to base operations (including personnel, roads, and parking areas), no interruption of mission, and on schedule and within budget. They estimated that the clean-up at these sites will be completed in 5 to 15 years. Mr. Coyle complimented the Robins and CAPE Environmental team on their outstanding work on these sites. He commented that, when these restoration activities are completed, significant areas of Base property can be returned to unrestricted use.